Review of: "Measuring the efficacy of a vaccine during an epidemic"

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Potential competing interests: No potential competing interests to declare.

The study by Scala and Cavallo reexamined the vaccine's efficacy measured during an epidemic. They found that near the epidemic peak the measured effectiveness represents a strong under-estimate of the vaccine efficacy.

In what follows, we shall point out a suggestion to make perhaps the paper more interesting, and also briefly discuss a potential problem.

First, given the different efficacies of the Pfizer, Moderna, Astra-Zeneca, and Johnson and Johnson COVID 19 vaccines, authors perhaps by examining phase III clinical trials could determine the underestimates of the vaccine efficacies that they claim exist, as discussed in their paper.

Second, we found in Eq.(6) a sign error in the quadratic term. In fact, the quadratic term is positive, not negative. Thus, the second order correction increases not decreases the vaccine efficacy.